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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,532	11/16/2001	Uwe Meisenburg	IN-5538	7777

26922 7590 06/20/2003

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EXAMINER

BERMAN, SUSAN W

ART UNIT

PAPER NUMBER

1711

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DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,532

Applicant(s)

MEISENBURG ET AL.

Examiner

Susan W Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/1/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Specification

The abstract of the disclosure is not on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 940 459 in view of DE 19826715, published 01-1999. EP '459 discloses coating materials intended to improve scratch resistance and provide good reflow characteristics. A hydroxy-functional binder and a crosslinker, such as a polyisocyanate, are combined with a branched, cyclic and/or acyclic C₉ to C₁₆ alkane functionalized with at least two hydroxyl or thiol groups or with at least one hydroxyl and one thiol group. See page 2, lines 1, to page 4, line 36. The hydroxyl functional binders taught include acrylicized polyurethanes, acrylicized polyesters and (meth)acrylate diols (page 6, lines 4-12, and page 12, lines 23-28). A mixture of different positionally isomeric diethyloctanediols, a thermal initiator and other coatings additives are used in the Example.

DE 19 826 715 discloses radiation curable compositions comprising an alcohol from 2,4-diethyloctane-1,5-diol with ethylene oxide or propylene oxide and a reactive compound comprising an ethylenically unsaturated radically or cationically polymerizable group. The reactive compounds taught do not contain a hydroxyl functional group. Thus, DE '715 teaches DE '715 that alcohol compounds, such

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as 2,4,diethyloctane-1,5-diol, are useful reactive thinners in radiation-curable compositions wherein a radiation curable ethylenically unsaturated compound is present.

It would have been obvious to one skilled in the art at the time of the invention to employ an acrylicized polyurethane, acrylicized polyester or (meth)acrylate diol as the hydroxy-functional binder in the coating compositions disclosed by EP '459. EP '459 provides motivation to do so by teaching that each of these kinds of hydroxy-functional binder is suitable and useful in the disclosed compositions. Therefore, one of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of providing a coating composition that would have a higher solids content, a low emissions formulation, provide improved scratch resistance and provide good reflow characteristics, as taught by EP '459. Further motivation is provided by the teaching of DE '715 that alcohol compounds, such as 2,4,diethyloctane-1,5-diol, are useful reactive thinners in radiation-curable compositions wherein a radiation curable ethylenically unsaturated compound is present. Thus, one of ordinary skill in the art at the time of the invention would have been motivated to select a radiation curable acrylicized binder as the binder in the compositions taught by EP '459 by an expectation of providing a radiation curable composition comprising a reactive thinner, as taught by DE '715.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

WO 99/29754 is cited as art of interest. US 6,482,869 to Bolte et al is relied upon for the disclosure of WO '754. WO '754 discloses an adhesive with multistage curing comprising two components. Component A contains at least one functional group polymerizable by irradiation and at least one functional group capable of reacting with a compound having at least one acidic hydrogen, such as isocyanate or epoxy. Component B includes a compound having at least two functional groups

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polymerizable by irradiation. The acidic hydrogen is provided by water, amino, hydroxyl, thiol-functional curing agent having a molecular weight up to 2500 (column 14, lines 3-46).

Settachayanon (5,089,376) discloses a coating polymer prepared by a condensation reaction of a diisocyanate, a hydroxy alkyl (meth)acrylate and a carboxylic polyol. The coating polymer may contain hydroxyl groups when a multifunctional polyol is employed in the preparation. Crosslinkers such as (meth)acrylates, divinyl ethers, epoxies and aminoplast resins can be employed with the urethane (meth)acrylated polymer.

Williams et al (5,238,744) disclose a tough polymeric mixture comprising the polymerized product of a mixture of a free radically polymerizable monomer, a set of polyurethane precursors, i.e. polyol and polyisocyanate, and a photoinitiator.

Kadambande et al (6,476,121) disclose paint compositions comprising a branched polyol additive.

Schwalm et al (6,242,101) disclose radiation curable formulations comprising ethylenically unsaturated prepolymers and difunctional ester of ethylenically unsaturated carboxylic acids with diols having a linear alkylene chain of 7 to 14 carbon atoms.

Rink et al (US 2003/0023017 A1) disclose diethylactanediol- dicarbamates and diallophanates for use in adhesives, luting compounds and coating materials.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9310 for regular communications and 703 872 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman
Primary Examiner
Art Unit 1711

SB
June 16, 2003